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900 YEAR OLD CHALUKYAN INSCRIPTION DISCOVERED IN TELANGANA

THIS ARTICLE COVERS 'DAILY CURRENT AFFAIRS' AND THE TOPIC DETAILS OF THE "900-YEAR-OLD CHALUKYAN INSCRIPTION DISCOVERED IN TELANGANA". THIS TOPIC IS RELEVANT IN THE "HISTORY" SECTION OF THE UPSC CSE EXAM.

WHY IN THE NEWS?

- A Kannada inscription dating back 900 years from the Kalyana Chalukya dynasty has been unearthed in Gangapuram, a temple town situated in the Jadcherla mandal of Mahabubnagar, Telangana.
- The inscription, dated June 8, 1134 CE (Friday), was authorised by the Customs Officers of Tailapa-III, the son of Kalyana Chalukya Emperor 'Bhulokamalla' Someswara-III.
- It documents the exemption of toll taxes for the maintenance of the perpetual lamp and incense offerings at the temple of God Somanatha.

ABOUT CHALUKYAS

RISE OF THE CHALUKYAN EMPIRE

- The Chalukyas emerged as a dominant force in the 6th century CE, establishing their capital at Badami in present-day Karnataka.
- Pulakeshin I, the dynasty's founder, led a period of expansion, defeating neighbouring kingdoms like the Kadambas and Mauryas.
- Pulakeshin II, a renowned ruler, further solidified their power through conquests and alliances. Under his reign, the empire reached its zenith, encompassing vast territories across South and Central India.

DIFFERENT BRANCHES OF THE DYNASTY

The Chalukya Empire eventually divided into distinct branches:

- **Badami Chalukyas:** Renowned for their artistic and architectural achievements, they ruled from Badami.
- **Western Chalukyas:** Based in Kalyani, they continued their predecessors' legacy, dominating parts of Karnataka and Maharashtra.

- **Eastern Chalukyas:** Carving out their own kingdom in Vengi (Andhra Pradesh), they played a significant role in South Indian politics.

FAITH AND ART

- The Chalukyas were patrons of a rich cultural environment.
- While Hinduism flourished under their rule, with magnificent temples dedicated to various deities built, they also displayed religious tolerance.
- Jainism and Buddhism received support, leading to the construction of impressive caves and monasteries.

ADMINISTRATION OF CHALUKYAS

Divisions and Revenue Collection

The vast Chalukyan Empire relied on a well-structured administrative system to maintain order and ensure a steady flow of income. The **empire was divided into smaller units called Rashtras or Mandalas**, each governed by a local administrator known as a **Mandaleshwara**. This ensured efficient local governance and responsiveness to the needs of the people.

Hierarchical Structure

For larger regions, the Chalukyas appointed **provincial governors called Rashtrakutas**. These governors **oversaw multiple Mandalas and reported directly to the king**, providing a centralised control mechanism. This hierarchical structure ensured **efficient communication and a clear chain of command**.

Land Revenue

Land revenue was the primary source of income for the Chalukyan Empire. The empire had a sophisticated system of land measurement and taxation. This **system ensured that taxes were levied fairly and accurately**, generating a consistent revenue stream to support the empire's infrastructure, military, and cultural endeavours.

DECLINE OF THE EMPIRE

- From the 12th century onwards, the Chalukya Empire faced internal conflicts, dynastic rivalries, and external threats, leading to its gradual decline.
- The Western Chalukyas succumbed to the Cholas in the 12th century, while the Eastern Chalukyas continued ruling in Vengi until the 13th century.
- They established an efficient administrative structure with well-defined divisions and a sophisticated revenue system.



ARCHITECTURAL MARVELS

- **Chalukyan temples** stand as testaments to their artistic brilliance, characterised by a unique blend of Dravidian and Nagara styles (known as the 'Gadag Style').
- The **Virupaksha Temple at Pattadakal**, a **UNESCO World Heritage Site**, exemplifies this style with its intricate carvings and towering gopurams.
- Similarly, the **Durga Temple at Aihole** showcases ornate pillars and sculpted panels depicting Hindu deities and mythological scenes.

LITERATURE AND ART FORMS

- The Chalukya era witnessed a flourishing of literature and classical dance forms.
- Pampa, a court poet, composed the epic poem "Vikramarjuna Vijaya" in Kannada.
- Sculptures suggest the development of Bharatanatyam during this period.
- Ranna, another prominent poet, celebrated Jain figures in his poem "Ajita Tirthankara Purana."

PRELIMS PRACTISE QUESTION

Q1. Consider the following statements:

1. Ranna, a prominent Chalukyan poet, composed the epic poem "Vikramarjuna Vijaya".
2. Rashtrakutas governed the administrative units known as 'Mandalas' in the Chalukyan Empire.
3. The Western Chalukyas were based on Kalyani

How many of the statements above are NOT correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Answer: B

MAINS PRACTISE QUESTIONS

Q1. Discuss the architectural innovations introduced by the Chalukyas and their significance in shaping the temple architecture of Southern India during their era.

Himanshu Mishra

PM SOLAR ROOFTOP SCHEME

SOURCE – THE HINDU AND PIB.

GENERAL STUDIES – SOLAR ENERGY, RENEWABLE ENERGY, MINISTRY OF RENEWABLE ENERGY, INTERNATIONAL ENERGY AGENCY, SUSTAINABLE DEVELOPMENT

WHY IN THE NEWS ?



- Recently, the Finance Minister of India, while presenting the interim budget in the Parliament on 1 February 2024, has announced the PM Solar Rooftop Scheme to promote solar energy in India.
- Under this scheme, up to 300 units of free electricity will be given every month to one crore families in India.
- The primary goal of this scheme is to make India self-reliant in the energy sector and reduce the electricity bills for the poor and middle class people of India.

- The government aims to promote the use of renewable energy and encourage widespread adoption of solar energy at the household level by reducing dependence on traditional energy sources.

IMPORTANCE OF SOLAR ENERGY IN THE ENERGY SECTOR IN INDIA :

- According to the International Energy Agency (IEA), India is expected to experience the largest energy demand growth globally in the next 30 years.
- A reliable and sustainable source of energy is important to meet the growing demand in the energy sector in India, which requires India to reduce its dependence on traditional sources of energy such as coal.
- Solar power has seen particularly significant growth in recent times, from 10 MW in 2010 to 70.10 GW in 2023.

CURRENT SOLAR ENERGY CAPACITY OF INDIA :

- Currently, according to a report released by the Ministry of Renewable Energy, by December 2023, India's total solar capacity is about 73.31 gigawatt (GW), of which rooftop solar power contributes about 11.08 GW. ,
- In terms of solar power capacity in India, Rajasthan leads among all the states in India in terms of total rooftop solar power capacity (18.7 GW) while Gujarat tops in India in terms of total rooftop solar power capacity (2.8 GW). .
- Solar energy has an important place in India's total renewable energy capacity, which is about 180 GW.
- India has set a target of becoming completely self-reliant in the field of renewable energy by the year 2030, under which a target has been set to achieve 500 GW renewable energy capacity by 2030.

WHAT IS A ROOFTOP SOLAR PANEL ?

- Rooftop solar panels are installed on the roof of the house. Solar plates are installed in these panels. This is a technology that produces electricity by absorbing energy from the sun's rays.
- Photovoltaic batteries are installed in its panels which convert solar energy into electricity.
- The electricity produced under solar energy also works the same as the electricity coming from the power grid.

PM SOLAR ROOFTOP SCHEME :

- The PM Solar Rooftop Scheme was started in the year 2014. The scheme focuses on expanding the capacity to install rooftop solar in the residential sector.
- The main objective of this scheme is to provide financial assistance and incentives to solar power distribution companies (DISCOMs) at the central level.
- Under this program, a target has been set to achieve 40 GW rooftop solar installed capacity by March 2026.
- There has been significant progress in the PM Solar Rooftop Scheme in recent days. Under its plan, it has increased from 1.8 GW in March 2019 to 10.4 GW in November 2023.

- Under this scheme, any consumer in India can avail the benefits of this scheme through tender projects or national portal (www.solarrooftop.gov.in). The scheme empowers consumers to choose the vendor and solar equipment based on their preferences.
- Under this scheme, after the installation and inspection of solar plants, the subsidy given by the government is directly transferred to the bank accounts of the consumers.
- Consumers have been provided the right to export surplus solar power to the grid, while receiving monetary benefits as per the prevailing rules laid down by the State Electricity Regulatory Commissions (SERCs) or Joint Electricity Regulatory Commissions (JERCs).

WHY IS THIS SCHEME SO IMPORTANT ?

- The scheme will help India meet its commitment under the Paris Agreement to reduce its carbon emission intensity by 33-35% by 2030.
- Under this scheme, India will be helped in reducing its energy dependence on fossil fuels and becoming self-reliant in the energy sector.
- With the aim of also accelerating the social and economic development of India, this scheme can provide clean and affordable electricity to millions of homes in India.
- Along with this, access to energy can be ensured through renewable sources of energy, especially in rural and remote areas of India where access to the electricity grid is limited.

IMPORTANT FEATURES OF PM SOLAR ROOFTOP SCHEME :

- The main goal of this scheme is to target low and middle income households of India who can benefit through lower electricity bills and additional income from surplus power generation.
- Under this scheme, financial assistance will be provided in the form of subsidy, loan or incentive to those eligible families of India, depending on their category and location, whose homes have still not reached electricity or other sources of energy.
- Under this scheme, technical assistance will also be provided by the government in the installation, operation and maintenance of rooftop solar systems to people's homes in India.
- In India, the scheme will be implemented by the Ministry of New and Renewable Energy (MNRE) in collaboration with state governments, distribution companies, banks and other stakeholders.

OTHER GOVERNMENT INITIATIVES FOR SOLAR ENERGY

1. **Solar park scheme**
2. **Atal Jyoti Yojana (Ajay)**
3. **National Solar Mission**
4. **Srishti Yojana**
5. **International Solar Alliance (ISA)**

CHALLENGES EXISTING IN PM SOLAR ROOFTOP SCHEME IN INDIA :

- Even after so many years of independence in India, there is a lack of awareness and knowledge among consumers about the benefits and processes of rooftop solar installation.
- This is due to the high upfront costs incurred under the scheme and the lack of easy financing options for consumers to invest in rooftop solar systems.

- There are a number of regulatory constraints and policy uncertainties in India with respect to net metering, grid connectivity, tariff structure, etc., which vary across states and regions in India.
- Poor quality of solar energy related equipment, technical issues like grid integration and management in its installation and its maintenance services etc. affect the performance of rooftop solar systems and its reliability in India,

WAY FORWARD :



- Pradhan Mantri Suryodaya Yojana is a welcome initiative and a very important scheme of the government to promote rooftop solar in India.
- The scheme can also help India achieve its renewable energy targets and climate goals as well as enhance its energy security and social and economic development.
- At present many challenges exist in this scheme. Therefore, for successful implementation of this scheme, there is a need to find solutions to those challenges through effective implementation and coordination among various stakeholders.
- For successful implementation of the scheme in India, there is a need to increase awareness and reach among consumers through large scale media campaigns, workshops, exhibitions etc.
- It is extremely important to provide financial incentives and subsidies to consumers, especially low and middle income households, to reduce the upfront cost and payback period of rooftop solar systems.
- There is a need to streamline and harmonize the regulatory and policy framework across different states and regions of India to ensure uniformity, clarity and consistency for rooftop solar installation and operations.
- In India, there is a need to improve the technical standards and quality of services related to installation and maintenance of rooftop solar equipment, grid integration and management etc. under this scheme.
- There is also a need to ensure the safety, efficiency and sustainability of rooftop solar systems under the PM Solar Rooftop Scheme in India.

- India's domestic manufacturers should also be brought under strict quality scrutiny and should not have to compromise on input costs and quality merely on the basis of being nationalistic or indigenous.
- While the Indian solar industry should also become another high quality exporter, it should also not forget that the scheme in India is like a road with no easy destination and they have a long way to go, so that This scheme can be successfully implemented in India and every house in India can get freedom from darkness.

PRACTICE QUESTIONS FOR PRELIMINARY EXAM :

Q.1. Consider the following statements regarding the PM Solar Rooftop Scheme.

1. This scheme has a provision to provide up to 300 units of free electricity every month to one crore families in India.
2. This will help India become self-reliant in the energy sector by reducing its energy dependence on fossil fuels.
3. India has set a target of becoming completely self-reliant in the field of renewable energy by the year 2030.
4. This scheme is operated by the Ministry of Renewable Energy in India.

Which of the above statement(s) is/are correct ?

- A. Only 1, 2 and 3
- B. Only 2, 3 and 4
- C. None of these.
- D. All of the above .

Answer – D

PRACTICE QUESTIONS FOR MAIN EXAM :

Q.1. What is the future of renewable energy in India? Discuss in detail the major challenges and their solutions for successful implementation of PM Solar Rooftop Scheme in India.

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